

What is claimed is:

1. A dialogue processing system for performing a dialogue with a user, comprising:

a plurality of slots, each said slot being a storage area for storing a preset information item which is required to achieve an aim of said dialogue with said user;

an analyzer for extracting information corresponding to said information item from information entered by said user in said dialogue and for storing the extracted information in the slot for that information item; and

a response processor for outputting response information to said user in accordance with information storage state of said slots.

2. The dialogue processing system set forth in claim 1, further comprising:

a knowledge base relating to the dialogue with said user; and

a knowledge base processor for extracting information corresponding to information items insufficient to achieve the aim of the dialogue with said user by using information stored in said slots and information stored in said knowledge base and for storing the extracted information in the slot for that insufficient information item.

3. The dialogue processing system set forth in claim 1, further comprising:

a knowledge base relating to the dialogue with said user; and

means for confirming conformity of information stored in said slots and the information stored in said knowledge base by using the information stored in said slots and the information stored in said knowledge base.

4. The dialogue processing system set forth in claim 1, wherein said information entered by said user in said dialogue is a sentence in natural language, and

wherein said analyzer comprises:

means for performing morpheme analysis for said sentence;

means for performing parsing processing for the results of said morpheme analysis; and

means for extracting information corresponding to the information item based on the results of the morpheme analysis and the parsing processing by using an extraction rule pre-defined to achieve the aim of the dialogue with said user.

5. The dialogue processing system set forth in claim 1, further comprising:

a knowledge base relating to the dialogue with said user;

means for determining whether information stored in said knowledge base is necessary to be updated if the information items required to achieve the aim of the dialogue with said user are stored in all of said plurality of slots; and

means for updating said knowledge base in accordance with a predetermined rule if it is determined that the information stored in said knowledge base is necessary to be updated.

6. The dialogue processing system set forth in claim 1, wherein said response processor comprises:

a response information storage device for storing response information for a user in correspondence with the information storage state of said slots; and

means for determining the information storage state of said slots and for acquiring and outputting response information for the user in correspondence with the information storage state of the slots from said response information storage device.

7. The dialogue processing system set forth in claim 1, wherein said information entered by said user in said dialogue is voice information entered in natural language, and

wherein said dialogue processing system further comprises:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

performing morpheme analysis for said sentence;

extracting information corresponding to the information item on the results of the morpheme analysis and the parsing processing using an extraction rule pre-defined to achieve the aim of the dialogue aid user.

determining whether information stored in a knowledge base g to the dialogue with said user is necessary to be updated if the ation items required to achieve the aim of the dialogue with said re stored in all of said plurality of slots; and

updating said knowledge base in accordance with a predetermined

determining the information storage state of said slots; and

acquiring and outputting response information for the user in

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information stored in a knowledge base relating to the dialogue with said user by using the information stored in said slots and the information stored in said knowledge base.

20. The method set forth in claim 17, wherein said information entered by said user in said dialogue is a sentence in natural language, and

wherein said extracting and storing step comprises the steps of:
performing morpheme analysis for said sentence;

performing parsing processing for the results of said morpheme analysis; and

extracting information corresponding to the information item based on the results of the morpheme analysis and the parsing processing by using an extraction rule pre-defined to achieve the aim of the dialogue with said user.

21. The method set forth in claim 17, further comprising the steps of:

determining whether information stored in a knowledge base relating to the dialogue with said user is necessary to be updated if the information items required to achieve the aim of the dialogue with said user are stored in all of said plurality of slots; and

updating said knowledge base in accordance with a predetermined rule if it is determined that the information stored in said knowledge base is necessary to be updated.

22. The method set forth in claim 17, wherein said outputting step comprises the steps of:

determining the information storage state of said slots; and
acquiring and outputting response information for the user in correspondence with the information storage state of the slots from a response information storage device for storing response information for a user in correspondence with the information storage state of said slots.

23. The method set forth in claim 17, wherein said information entered by said user in said dialogue is voice information entered in natural

language, and wherein said method further comprises the steps of:
 converting said the voice information into character information;
and
 converting said response information into voice information.

24. The method set forth in claim 17, wherein, in accordance with said information storage state of said slots, said outputting step comprises a step of outputting response information for requesting said user to enter information items that are insufficient to achieve the aim of the dialogue with said user.